

NO 4

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1824

W. E. H.

Dean

On  
Cinchonal

in

Intermittent Fever

by

George A. Eckert

of

Pennsylvania. 1823.

in South Africa

1888

W. J. M.

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seas, off  
history, and  
practice

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Canifolia

## Cinchona

Before entering upon the consideration of Cinchona as a medicinal article in intermittent fever, I propose, briefly, to give a sketch of its natural history, and of its mode of introduction into regular practice.

The tree, which affords this invaluable article of the *materia medica*, is a native of Peru. Notwithstanding the diligent researches of botanists, the history of this important genus seems yet to be involved in some considerable perplexity. Not less than about thirty different species have been described by authors. Though the different varieties of bark which now occur in commerce, are chiefly allotted into three kinds, viz. the pale - the red - and the yellow. - Or in technical language, *Cinchona lancifolia* - *oblongifolia* - and *cordifolia*.

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but of a very  
near relative, a  
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best sort, and  
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and out sick  
Selections from

The knowledge of the properties of bark, was originally acquired by accident. An Indian being seized with a violent paroxysm of fever, and finding no other water to quench his thirst, was forced to drink out of a pool, strongly impregnated with the bark from some trees having fallen into it, by which he was cured. So is the mode of its introduction into the materia medica left curious. It is related, that the lady of the viceregy of Peru, whose name was Cinchona, was affected with a tertian intermitent out of a very intractable nature. She was advised by the governor of Lima, who had been made acquainted with the medicinal powers of the bark, to use it as a remedy in her disease. She took it, and was soon relieved. The report of this case diffused its fame throughout Spain, when it came into general use. To commemorate this incident, Pimental, in a spirit of gallantry, conferred the title of Cinchona on the medicine.

About the year 1649 the bark was carried to Italy by the Jesuits, when it was gratuitously distributed among the indigent sick at Rome, by Cardinal de Lugo and his physician, Sebastian Baldo, to the latter of whom is due the credit of

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and satisfy  
you; and still  
have no final  
opinion.

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having written the first work on the valuable article. Its fame  
soon rapidly extended throughout France, Germany, England  
etc; and although opposed on all sides, the value of its  
powers was finally established by the testimony of universal  
experience.

A variety of prejudices respecting the bark prevailed for  
long time after its introduction into Europe, the most ancient  
of which do not even deserve to be noticed; such as, that those  
who use the medicin, will die within a year; or, according  
to others, in seven years; that it was particularly pernicious  
to fat persons; that it strikes into the bones; and that it  
is often followed by obstructions of the viscera, slopings &c.  
Happily such fantastic and ill-founded objections no longer  
invalidate the merits of the article, at least in medical  
opinion. Yet this preposterous notion is cherished even at  
the present day, by the vulgar of some parts of our country,  
so that it materially interferes with the proper adminis-  
tration of the medicine. Cases of this description have come  
under my own observation.

Dr. Wm. Clark's manuscript.

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Bark, as already observed, was originally employed in the cure of intermittent fever, a disease in which it has maintained an unrivalled reputation. At one time it was even considered a specific in that disease; and to adduce any additional <sup>and</sup> of its superior efficacy, would now indeed be altogether superfluous.

Notwithstanding all practitioners are agreed as to the utility of the medicine in question, still the unanimity of sentiment is not perfect, as respects the period of the disease at which it ought to be exhibited; — the proportion of its administration; — and the utility, or inutility, of a previous resort to evacuant remedies. To determine when, and in what manner, the bark should be given, and also the necessity of preceding evacuants, I will, for the sake of perspicuity, divide the consideration of the subject into the following heads, and treat of these in their proper order.

1. — The period of the disease proper for its administration.
2. — The nature of the symptoms, with the age and

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habit of the patient.

3. The climate, season, & the year, and nature of the Epidemic.

4. The form of administering the bark.

To avoid repetition, I will not confine the consideration of accounts under any particular division.

Firstly.—The period of the disease proper for its administration. —— & before observed, considerable diversity of opinion has been expressed upon this subject. Gmelin gave it at seven intervals, and in order to induce incision to expect most of its antifebrile power. The manner of taking of bark can now be described more lucidly, of which the size, a volume was a dose, repeated morning & night on the intermission, or well days, until the whole was taken. The same quantity was repeated there, interposing a fortnight between each. Heberlein gave as much as four ounces immediately before the accession of the paroxysm; and Dr Clark, Walker, and others, recommended it during the hot stage. It is also stated that among the early writers on this point

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was, the absurd one, that, in an intermittent disease, there should be allowed to elapse before the bark was exhibited, in order that morbid, matter may be thrown off by the perspiration. While such practice is not a <sup>strict</sup> rule, regulated by the administration of the bark, we cannot be surprised that it was not found very successful.

The physician's exhibit the bark, as constantly during the ague, as is convenient, and upon this point, practice and theory are now, I believe, unanimously agreed. But there are some discrepancies as to the particular period of the ap-  
eas, at which it should be given in the largest quantity. Cullen is decidedly in favour of giving it in pretty large doses just before the accession of the perspiration; and I find in the other handbooks that the bark should be given at a great interval of time, as possible from the next expected perspiration. Dr. A. Philip's *Handbook*, in his excellent work on *Acute Diseases*, observes "when the ague is sharp and the quantity of the bark required considerable, it must be given immediately after the perspiration, and continued till

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your name  
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to your idea

the return of the preceding fit, at ten or twelve intervals, as  
the case is more or less in quiet and the Stomach able to bear it.  
On the other hand when the ague is strong, especially when  
a great quantity of bark is not necessary, the exhibition should  
be limited within six or eight hours of time at which  
the paroxysm subsides. So, a considerable quantity given at  
this period is more likely to recruit, than to prove yourself  
as smaller doses throughout the whole of a long ague. In  
the case of intermitting continuous fits this method, especially  
in the Stomach and bowels, and that in this account our ordinary  
method is directed, to have a proper quantity of bark in  
the prime view at the time the paroxysm is expected.

To prevent the recurrence of the paroxysms, as we speak  
of it, it is manifest, that we should begin the administration  
of the bark (provided no contra-indications are present)  
at a period sufficiently advanced, to insure us that the system  
will be fully under the impression at the time the fit is anti-  
cipated. The early exhibition of the bark in the ague, is  
the more especially necessary, when we consider the operation



on the system. There are few sensible effects distinguishable  
upon this, in contrast with the feverish. It is an antiseptic and  
purificative of the system, and, while abundantly producing an  
evident alteration in the pulse, even with invasions of the an-  
imal economy. The astringent power however, which it possesses  
can only serve to expediting the recovery of the feverous,  
and thus affording a removal of the disease.

With a view to avail ourselves of every advantage, it has  
been the practice to exhibit the bark from the beginning of the disease  
at intervals or continually, and as frequent as repeated  
visits to the Stomach will bear. This can be done upon no but  
decidedly typhus, but even in so less degree. It can even be  
administered at the next visitation.

Secondly. - The nature of the symptoms with the age  
and sex of the patient. With regard to the astringent  
bark, in the ordinary cases of catarrh, not a little  
must be said. The property of concreting the Stomach and bowels,  
is now fully established, and, although doubted by some, yet general  
experience is decidedly in favour of the practice. This, and the

all that money  
up for his son  
in exchange  
at the deposit  
one thousand  
dol. during  
I will then  
not charge you  
for his son's  
and brother's  
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I shall have  
on that occasion  
you to speak  
to him, and  
the money  
then paid  
will be  
given to  
them.

doubt, that many cases may be effectively cured by the bark without any preparation or internal cathartics. This is especially the case in those instances when a man in spring or winter is subject to attacks from the bilious in the preceding autumn; and which may therefore be considered as symptoms of imminent attacks. But in intermissions occurring in summer and autumn, in mesomastic districts, and where the bilious secretions are much disengaged, violent and copious purges are strongly demanded; and every practitioner who knows this intermission. Besides, the solitary effects which can immediately produce on the general system they know the most delicate parts of the alimentary canal, especially of the stomach and for D'Ullisse observed in a note to Voltaire, that the bark given that originally such adhesive matter as might interpose between the bark and the internal surface thus preserving for that a more immediate access to the internal coat, and thereby add to the efficacy of its action. In certain cases of intermissions, nothing else is requisite preliminary to the adoption of the bark. Common cases frequently occur, which from the nature of their symptoms and regimen, additional measures before the bark



earth administered with advantage. When the case is of an inflam-  
mable & violent description it is one of our most powerful and op-  
erative remedies. Professor Oberndorf & Eberle in their materia medica  
say, "is an excellent, but inferior in some cases of inflammations  
following the bark. I have had many cases of this kind in my own  
practice. The tendency to inflammation is seen it is sometimes so  
great that the bark has not power to subdue it. In these cases  
the inflammation is insatiable, attended with suppuration and an  
excited state of the body; the bark stage is not marked by others  
signs but only by suppuration and purulent discharge, and the bark stage  
does not go off by a profuse and universal suppuration. In such  
cases the bark can seldom be employed with advantage, otherwise  
one's stock is bound by one's own and other accounts. So one  
good blistering and cathartics, instead of this kind of bark will  
cure all, upon its genuine character it cannot well be known,  
the particular which coincides with stage, copious and profuse.  
The bark will now & then be of lesser importance,  
having been previously employed."

It has been recommended by some, to delay the use of the bark

will be right  
the following  
to be done by  
the next time  
book measure  
published.

The same  
and you the  
other day  
a different  
but same  
should be  
done.

until the inflammatory state of the distin bushes increases to  
the continuance of the disease. The conduct should have  
as to have to protract the case, and perhaps often to attend with  
the most concession. We are only to stay, & wait by the oppo-  
site measure we have mentioned that state of the system, which  
prohibits its active employment.

The general plan is intermission, one smaller, finer &  
not to give the body until a complete up, when a sufficient  
of the complaint has taken place. This should be sufficient  
to prevent too many such restrictions will result, in & in as the  
so consider the mode in alone, or with certain moves & certain  
stimulating, without delay, as for a physical exertion of the patient.  
Dr Wilson whom I have already quoted, remarks when ~~the~~  
the ability is great, the symptoms consequent alarms us and  
we apprehend of the power again now as especially when the only  
cause without an impression, it is often necessary to do as you  
is to sit about the end of the last fit, for some short time, & with  
the motion like a place about it, it will be impossible to do this in a  
sufficient quantity before the succeeding paroxysm. And, then

I went to  
in St. Paul  
yesterday  
all morning  
at the forenoon  
and the  
evening  
and found  
such a  
lot to do  
to be with  
when the  
books are  
in a few days  
I would  
you should

probable must reduce into the most tame & patient of  
men and the appearance the bark of propofite the same  
consolive power & slight not the st. patient.

Several cases of Dr. L. a malignant tumor he was about  
in 2. Months able to live in time. In this a common  
opening in the fibrous. So soon as this was so that  
appearance of excretion and continued it until the return  
the physician who began to a bark in some of them  
and this not apprehend assistance had the pleasure to see  
him in this case.

It would even appear that even  
dry and purging should not prevent our giving the bark in  
cases. & the speaking of the propensity of delay with us of the  
bark in form cases until after the operation of no small importance  
to us with just mentioned however that in urgent cases  
when there is no inflammation, such as the bark might not be  
to stand an hour convenient of the state of the stomach and bow  
els. a very strong opinion from the observations of Dr. Jackson,  
Dr. Donald's & others, & others, that actual vomiting and pur  
ging should not induce us to delay the exhibition of the bark

which shall  
be a job  
that I can  
do with  
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smallest  
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of species  
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the best.

which state of the fever requires it. In my medical practice  
I have often observed that the bark is often a bad fit  
to the stomach, and in some cases peeps off. Smooth instantly by  
the yod. On such occasions of bark being vomited, take a tea-cupful  
of the bark tea when a small quantity will cover. In violent  
cases, 30. Dr. B. bark. Then, however, when it does, no message to  
quench bark below contrived, extraction will be a remedy.  
The yod, I say, will be a remedy, and I mean that by means  
of a cathartic, did, not prevent the bark covering the aye. &c.

For abdominal swelling, and purging, now, in left ventral  
cases, the proper treatment is to prevent the swelling by a bland  
and the prima via an sufficiently power for this extraction  
and to seal the compound system by opiate by you in moderate  
dose bark.

Intermittent fever is sometimes associated with violent  
distress, and then the bark has been held incompatible by  
some. If the distress be violent then cases in which ch' bark  
will be considerably inflammatory will pass into others who  
reject it, not unfeasted, but abnormal rule it can not be admitted.

<sup>1</sup> not written in black ink.



The question has several times occurred to me," says Dr. Cullen, "the use of persons, who having, for a while taken a medicine, remittent, had lumous and intermitting remissions in the hyper-sensitivity, and had, when in that condition, a return of the intermission. In such cases I have found nothing in the bark and resin found able to excite the affection of the bark and resin, and in other such cases, have constantly found that the excretion of the bark, and admitteth thereby of a pollution of the person, and brought on desultory attacks of the fever-syndrome."

Such an excreted material, is in time separated, and is in the bark. Patients that are very acute, and violent, will have convulsions much more frequently, and sudden fits of pain. It is best to give a very strong bark in such cases, and not to let the patient be cold, or to treat by purgatives, as a reduction of the infection by irrigation, or in other ways, can only be effected with much more trouble. To form a very violent excretion will give a very violent, and the violent bark will be best before an excretion, the bark will be most convenient, and by the most agreeable smell. Cases, the

long time to come  
we'll have a lot  
of time to consider  
for a while  
we'll be in all  
over the world  
we'll have  
time to have  
considerable  
but we can't  
allow that to  
be popular, we  
have to have  
that kind of  
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and a lot of

descriptions were studied by Dr. Parish in his time, and he  
and I of all those who are now living, I am sure, form an  
attack of diarrhoea, before he took the cure; and although the cure  
apparently will affect, he rapidly sank into a typhic state, and  
died in about four and a half hours. He recovered  
from this attack, but in the opinion had in this case the last  
year 30, was restored to sooner; yet the prostration was again  
considerable. In the succeeding autumn he had another attack,  
but over only a little chubub was seen, and this was soon  
easily followed by the bark, sanguinaria, & without any other  
prostration or nausea. This time he recov.'d. in two days,  
he was present in the church immediately after the time when  
which characterized the two former attacks.

Thirdly: The Climate, season of the year, and  
nature of the epidemic. — — It will come to be deservedly  
as more generally addressed with an examination of implements  
out of this nation & the one under consideration in particular. The  
splitting plan is more required for marshes, to the end of the land,  
and as it is not so much to be apprehended, it can be



varied, with steady, but moderate heat. But in warm and sultry climates, exactly the reverse is the case. The heat of the climate is the cause of a still, or unchanged, state of increased excretion to that a certain degree are sufficient. Examination it appears, although the may sometimes prove that the symptoms of attack, either from natural or from the increased excretion of the body. On this account comes in the alternative, and death, possibly occurring round the bed, or an early funeral.

Intermittents, common in open and warm climates, are generally followed about the hour of the night, or about the break of day, this being precisely in the summer and autumn. It is especially in the case of real intermitents that the first, or death, occurs about 2 o'clock, and the two that open the real attack, continue the exhibition of the bark, that may be more easily delayed; but even on this it may often be exhibited very early.

The common course of treatment is secretary, moderately affected by the nature of the epidemic. This was strikingly evinced in the Indian tents and hospitals prevailing during the last season in the City and the vicinity. It was not uncommon to

and then looks  
the other at  
a time when  
the symptoms  
are visible & the  
local affection  
well developed  
is easily diag-  
nosed & treated  
when cut open.

so often taking in the character of dysentery, and sometimes  
it vanishes it leaves in this form. Then comes a stupor  
so far determined to the head, or lungs &c, producing all  
the symptoms of inflammation; this is rare, and until this  
comes the man with total insensibility. Under the  
first affection not mentioned did not much interfere  
with the employments of the body even in the highest degree;  
or developed some cases when it was seen with little more  
than a disturbed complaint. But as regards the particular  
which it can present a typical tendency.

Secondly. - The form of asthma from the body.  
This is often observed, almost the only species we employ in  
this matter in the first, it is with violent, short but  
frequent attacks the, and is inferior to the, of the two other  
species and of certain practitioners generally, we may in  
concord with his statement. Park represented in  
a case of course. Presides the substance, it is seen in the  
first, violent, short but violent; but when the asthma  
will with substance we ought not to have recourse to it.

the members  
will be called  
and are  
about to be  
dealt with  
in view of the  
fact that  
the record  
of the  
last session  
has been  
made public  
and the  
Court of Appeal  
has been  
invited to  
examine the  
same. It is  
not to be  
entertained  
in this  
Court.

other mentioned forms. However, in some cases, from the insubility and the nature which it has, the powder can not be retained and rendered circumstaneous even. In other preparations are substituted with advantage. But, full of dangerous preparations, now, perhaps, better adapted or more efficacious, than the sulphate of quinine. I used, first used, in the Parisian hospitals in different intervals, in doses of four grains, morning and evening, and it established with great success. So that returning to me, it does, I have just prepared it in this city, perhaps this powder. Since then, I had account much advantage and its employment is now intended with general success. Besides, its promptness in curatives, I hope, to which it is administered, it is a great recommendation. This preparation, being almost devoid of taste, and minute in its dose, will often be taken when every other form would be rejected or abhored. On this account it seems to be particularly adapted to children and other delicate persons, tho' its employment is by no means confined to these. Eight grains are considered equivalent to an ounce.

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and are enough  
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in due time  
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such acts of  
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according to  
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and in which  
when and in  
such conditions

of genuine bark. It is soluble in the shape of pills, or dissolved in a solution of gum arabic, with a little sugar.

In the administration of the bark in substance, it will not be amiss to say a few words on the different vehicles which are employed. It is not unfrequently given in simple water, or coffee, or tea, but milk, from its concealing the taste of the bark, is preferable; and in common cases, or when we must avoid additional excitement, such vehicles are the best adopted. But if there be reduction of strength, the physician may be given in porter, or wine; and in patients accustomed to the use of ardent spirits, brandy is often the most appropriate vehicle. Some speak highly of lime water, as particularly increasing the power of the bark.

When the stomach is weak, aromatics, and bitters are often advantageously combined with the bark. If it induces purging, we must have recourse to opium and astringents; but if there is reason to suspect, that it is dependant on acidity, we combine it with some antacid. If, on the other hand, it occasions costiveness, it is necessary to add some gentle laxatives;

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with it; with  
with form of

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of the alluvium  
it has been re-  
brought by:-  
The embayment  
formed  
internally, as  
the, tendency  
for, an and  
to close, and

and for this purpose Rhubarb is particularly adopted.

The virtues of the bark are sometimes greatly improved by uniting with it other articles, particularly alum, cremons tarter, or the carbonate of potash, or soda. The proportion is about a drachm to the ounce. Saponaria is often beneficially combined with it, either in substance, or what is perhaps more common, in the form of an infusion.

When, from the resistance of children, or from the irritability of the stomach, the bark can not be taken by the mouth, it has been recommended to inject it per anum, or apply it externally to the body; - for the latter, different means have been proposed. The employment in this way, is stated to have been occasionally practised. Compared, however, with an exhibition of the bark internally, it must prove an insufficient substitute; and since the introduction of the sulphate of opium into common practice, we will, perhaps, on but few occasions, have need to resort to these, more feeble and inconvenient means.

Ind

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